

CLAIMS

What is claimed is:

1. A layered material for use in an electronic component, comprising:
 - 5 a substrate layer;
 - an active component layer that comprises an active material coupled to an adhesion promoter layer, wherein the adhesion promoter layer is selectively patterned to expose a contact area on the active material; and
 - at least one additional layer.
- 10 2. The layered material of claim 1, wherein the substrate layer comprises a silicon-based compound.
3. The layered material of claim 1, wherein the electronic component is a printed circuit board.
4. The layered material of claim 1, wherein the active material comprises a resistor.
- 15 5. The layered material of claim 1, wherein the active material comprises a capacitor.
6. The layered material of claim 1, wherein the active material comprises a metal.
7. The layered material of claim 6, wherein the metal is copper or nickel.
8. The layered material of claim 1, wherein the adhesion promoter layer comprises an organic material.
- 20 9. The layered material of claim 8, wherein the organic material comprises black oxide.
10. The layered material of claim 1, wherein the at least one additional layer comprises an adhesive.
11. The layered material of claim 1, wherein the at least one additional layer comprises an active component layer.
- 25 12. The layered material of claim 1, wherein the at least one additional layer comprises a dielectric material.
13. The layered material of claim 12, wherein the dielectric material is porous.

14. The layered material of claim 12, wherein the dielectric material comprises an organic compound.

15. An electronic component comprising the layered material of claim 1.

16. The electronic component of claim 15, wherein the component is a printed circuit board.

17. An electronic product comprising the layered material of claim 1.

18. A method of producing a layered material for an electronic component, comprising:
providing an active material layer;

forming an active component layer by applying an adhesion promoter layer to the active material layer;

coating the active component layer with a photoresist material;

patterningly exposing a portion of the photoresist material;

removing the unexposed photoresist material from the active component layer to form a bare active component layer comprising the active material and the adhesion promoter layer and a covered active component layer comprising the active material, the adhesion promoter layer and the photoresist material;

contacting the bare active component layer with a reactive solution, wherein the reactive solution removes the adhesion promoter layer from the bare active component layer in order to form the contact area; and

removing any remaining photoresist material from the active component layer.

19. The method of claim 18, wherein providing an active material layer comprises providing a continuous or non-continuous resistor material layer, a capacitor material layer, or a signal layer material layer.

20. The method of claim 18, wherein forming an active component layer comprises spinning on or printing the adhesion promoter layer on to the active material layer.

21. The method of claim 18, wherein patterningly exposing comprises using a photoresist mask, a laser beam, or a patterned light source.

22. The method of claim 18, wherein the reactive solution comprises an acid.
23. The method of claim 22, wherein the acid is sulfuric acid.
24. The method of claim 18, further comprising the steps of electrically testing layered material by contacting an electrical probe to the contact area.